FIG. 1A

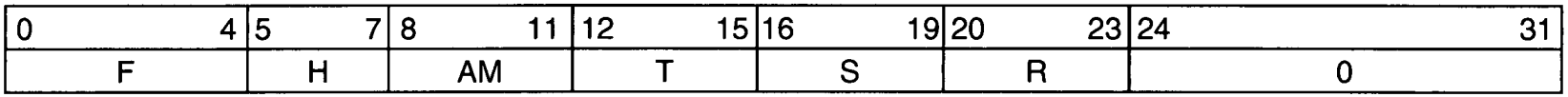


FIG. 1B

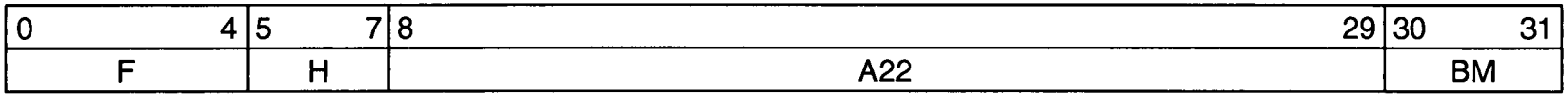


FIG. 1C

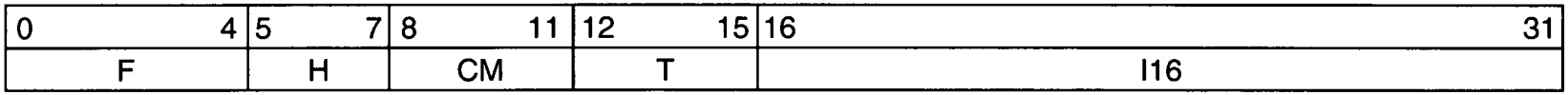


FIG. 1D

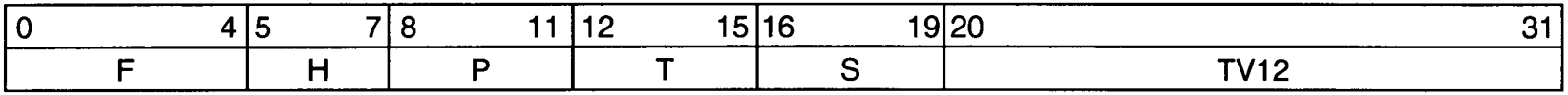


FIG. 1E

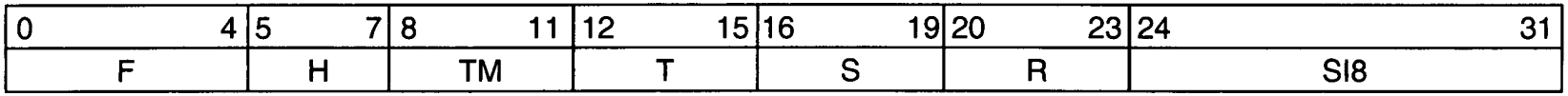


FIG. 1F

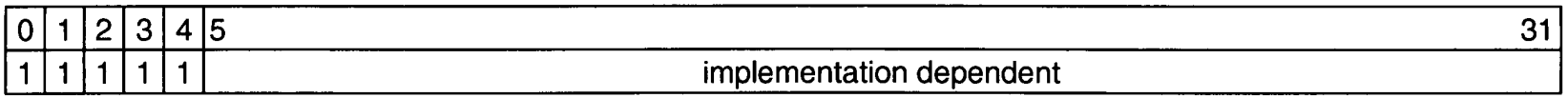


FIG. 2

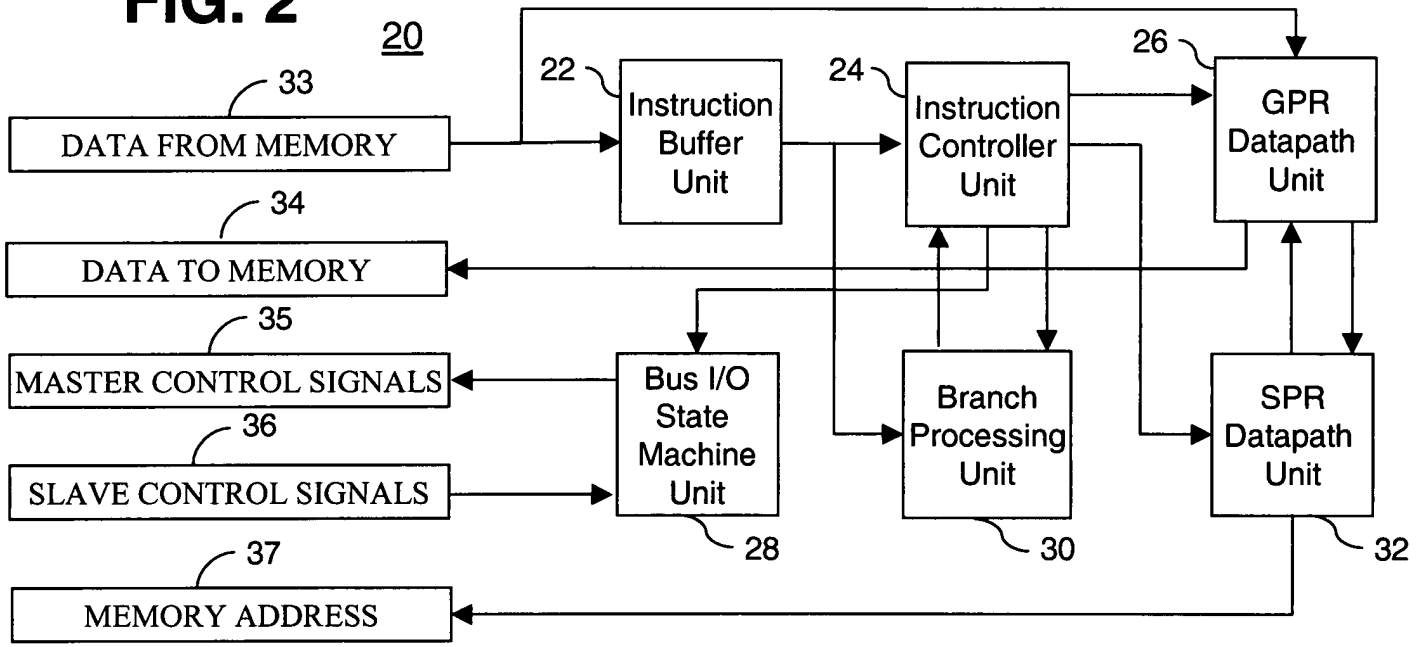
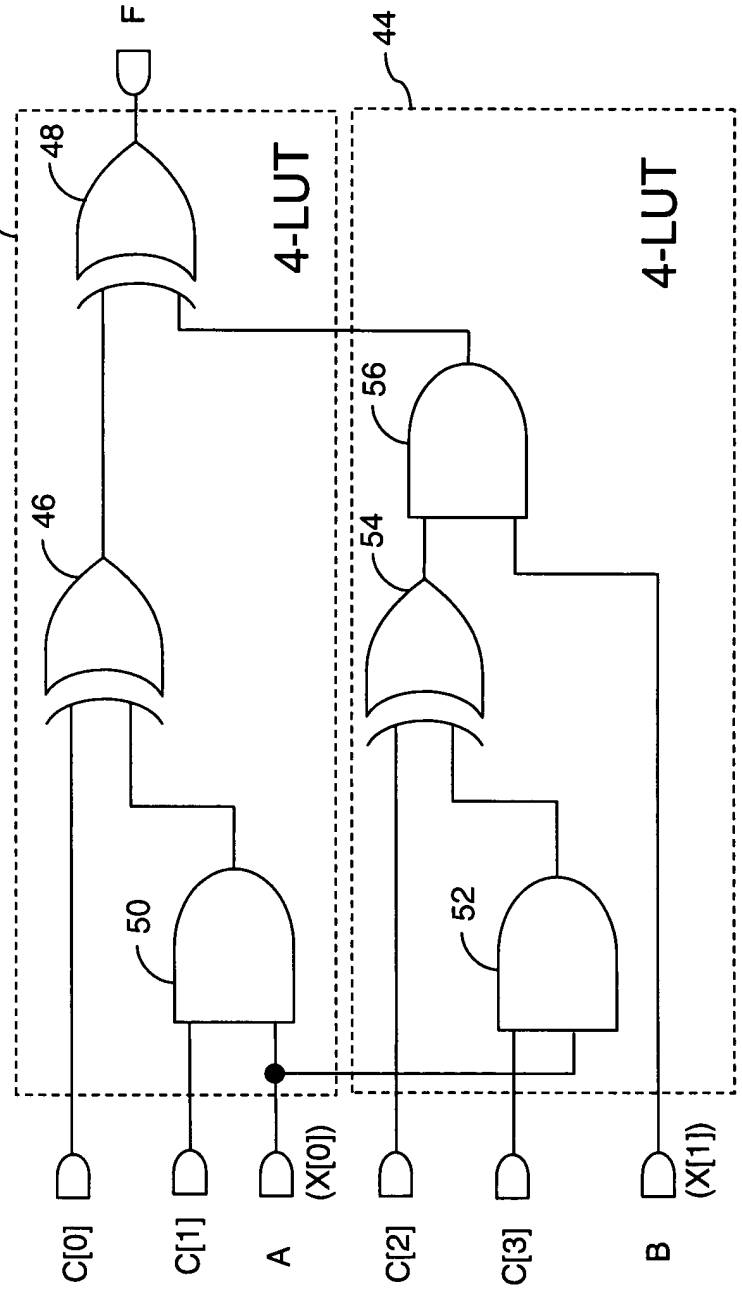

20
33
DATA FROM MEMORY
34
DATA TO MEMORY
35
MASTER CONTROL SIGNALS
36
SLAVE CONTROL SIGNALS
37
MEMORY ADDRESS
22
Instruction Buffer Unit
24
Instruction Controller Unit
26
GPR Datapath Unit
Bus I/O State Machine Unit
28
Branch Processing Unit
30
SPR Datapath Unit
32

FIG. 3



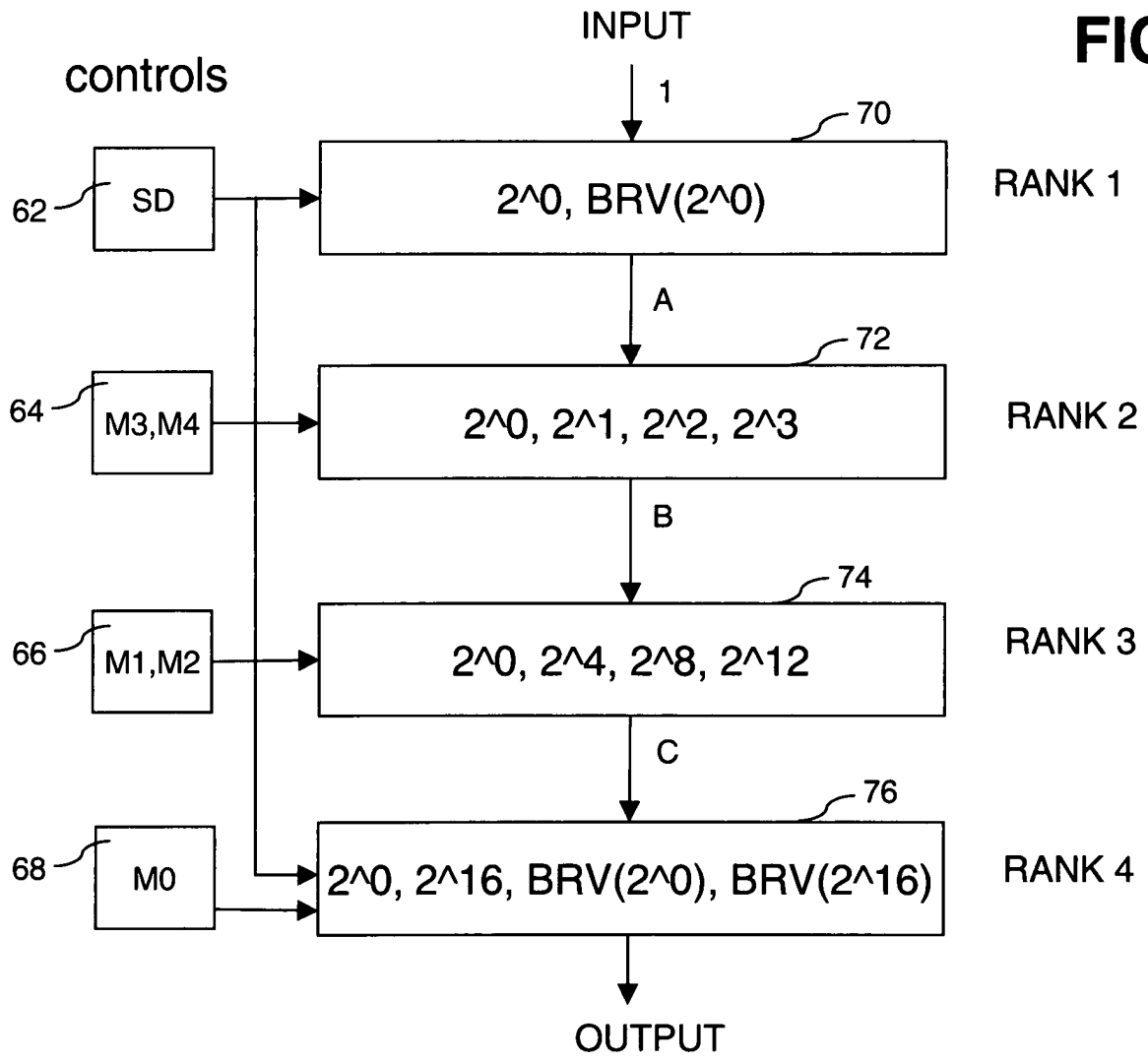

INPUT
controls
1
70
62
SD
2^0, BRV(2^0)
RANK 1
A
72
64
M3,M4
2^0, 2^1, 2^2, 2^3
RANK 2
B
74
66
M1,M2
2^0, 2^4, 2^8, 2^12
RANK 3
C
76
68
M0
2^0, 2^16, BRV(2^0), BRV(2^16)
RANK 4
OUTPUT

FIG. 4

60

FIG. 5

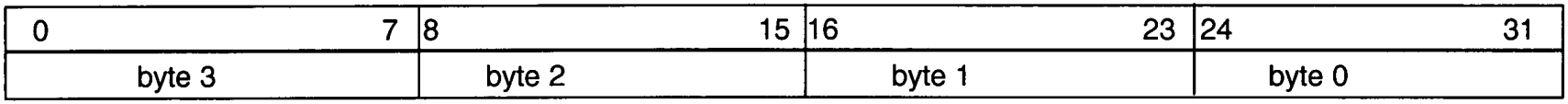


FIG. 6

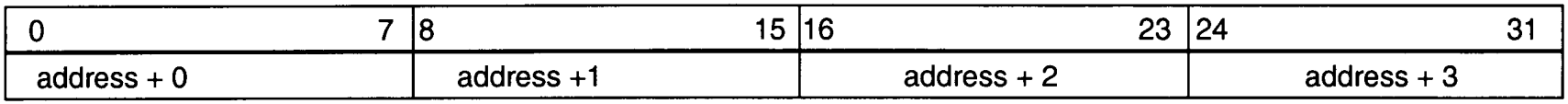


FIG. 7

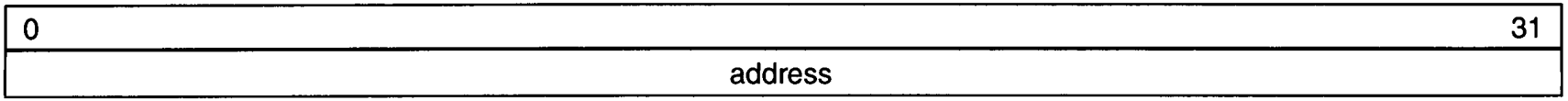


FIG. 8

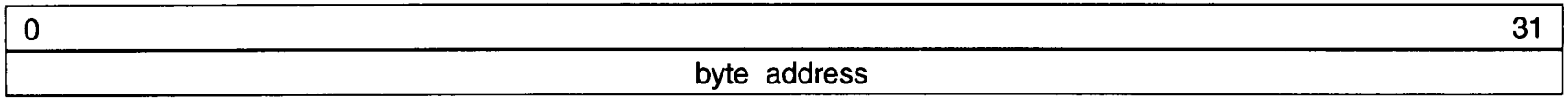


FIG. 9

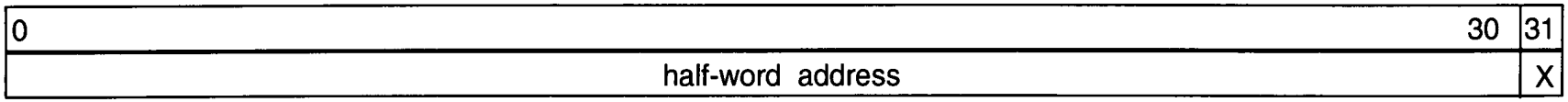


FIG. 10

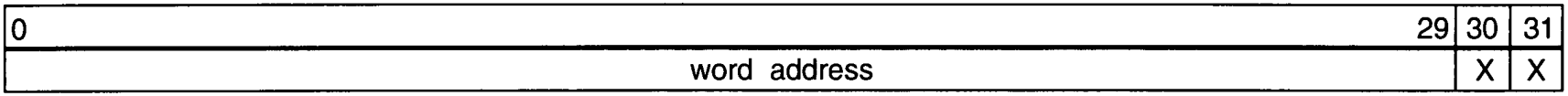


FIG. 11

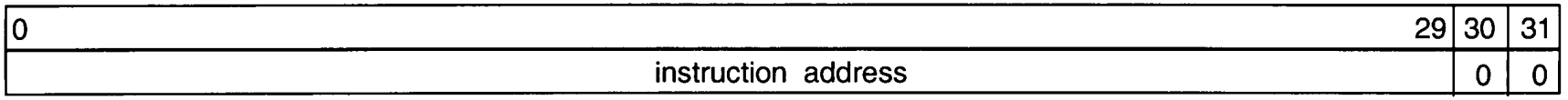


FIG. 12

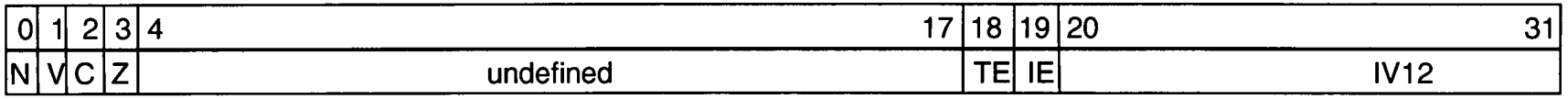


FIG. 13

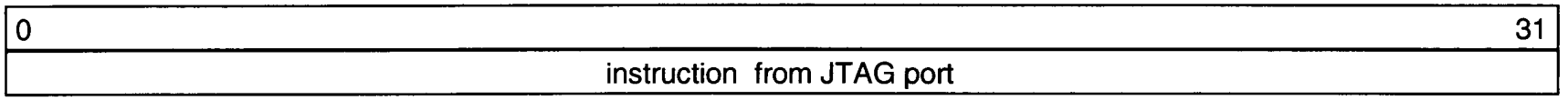


FIG. 14

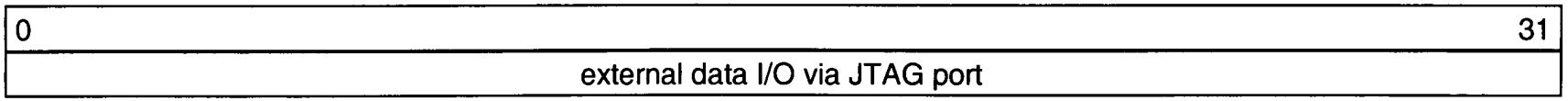


FIG. 15

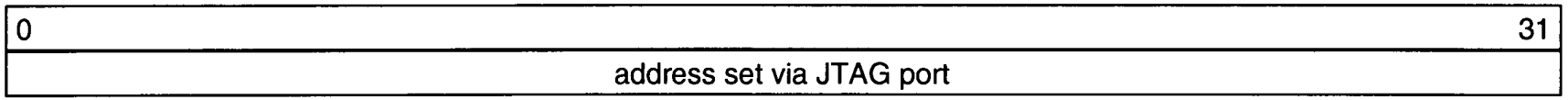


FIG. 16

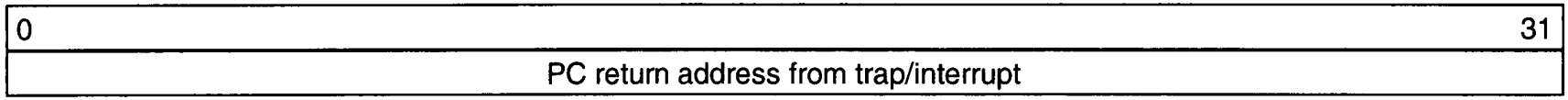


FIG. 17

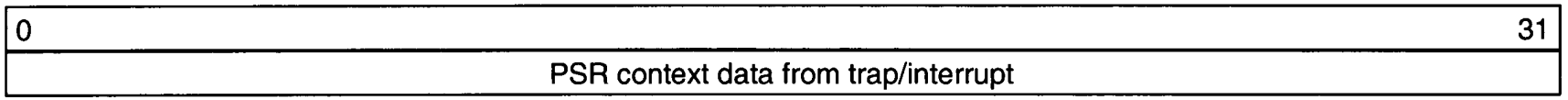


FIG. 18

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	I_0	I_1	I_2	I_3	I_4	I_5	I_6	I_7	I_8	I_9	I_{10}	I_{11}	I_{12}	I_{13}	I_{14}	I_{15}

FIG. 19

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
I_0	I_1	I_2	I_3	I_4	I_5	I_6	I_7	I_8	I_9	I_{10}	I_{11}	I_{12}	I_{13}	I_{14}	I_{15}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FIG. 20

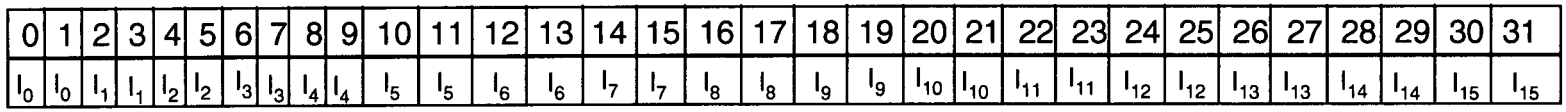


FIG. 21

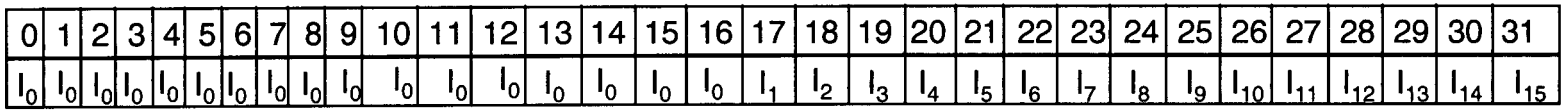


FIG. 22

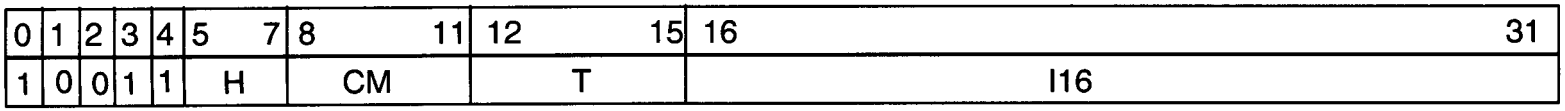


FIG. 23

CM[0:3]	operation mode	bit mask mode	composite immediate instruction
0000	and	fill low	imm_and_fill_low
0001	or	low	imm_or_low
0010	xor	low	imm_xor_low
0011	add	low	imm_add_low
0100	and	fill high	imm_and_fill_high
0101	or	high	imm_or_high
0110	xor	high	imm_xor_high
0111	add	high	imm_add_high
1000	and	dplx	imm_and_dplx
1001	or	dplx	imm_or_dplx
1010	xor	dplx	imm_xor_dplx
1011	add	dplx	imm_add_dplx
1100	and	sign	imm_and_sign
1101	or	sign	imm_or_sign
1110	xor	sign	imm_xor_sign
1111	add	sign	imm_add_sign